

## **WHAT IS CLAIMED IS:**

1. Rubber mixtures, comprising organosilanes of the general structure

$$R^1 R^2 / R^3 Si - R^4 - Z \quad (I)$$

wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> independently of one another are H, (C<sub>1</sub>-C<sub>4</sub>)alkyl, (C<sub>1</sub>-C<sub>4</sub>)alkoxy or halogen and the number of alkyl groups is ≥1; R<sup>4</sup> is a linear or branched (C<sub>1</sub>-C<sub>18</sub>)alkylidene group; and Z = H, halogen, SCN, SH or S<sub>x</sub>-R<sup>4</sup>-SiR<sup>1</sup>R<sup>2</sup>R<sup>3</sup>, where x is 2 to 10.

2. Rubber mixtures according to claim 1, wherein the organosilanes comprise dialkylmonoalkoxysilyl functional groups.

3. Rubber mixtures according to Claim 1, comprising the organosilanes in an amount of 0.1 to 15 wt.%, based on the amount of rubber used.

4. Rubber mixtures according to Claim 1, comprising organosilane-polysulfane and organoalkylsilane.

5. Rubber mixtures according to Claim 4, wherein the organopolysulfanesilane is a silane in which:  
 $R^1$  = ethoxy or methoxy,  $R^2 = R^3$  = methyl,  $R^4$  = propylidene or isobutylidene and  $Z = S_xR^4-SiR^1R^2R^3$ , where x has a statistical mean value of 2 to 4.

6. Rubber mixtures according to Claim 1, wherein the organoalkylsilane is a silane in which:  
 $R^1$  = ethoxy or methoxy,  $R^2 = R^3$  = methyl and  $R^4 = (C_1-C_{18})alkylidene$ .

7. Rubber mixtures according to Claim 1, comprising a synthetic rubber, a silicic acid as filler and an organosilane-polysulfane selected from the

group consisting of bis(3-{dimethylethoxysilyl}propyl) and bis(3-{dimethylethoxysilyl}propyl)disulfane.

8. Rubber mixtures according to Claim 1, comprising a synthetic rubber, a silicic acid as filler, an organosilanopolysulfane selected from the group consisting of bis(3-{dimethylethoxysilyl}propyl)tetrasulfane and bis(3-{dimethylethoxysilyl}propyl)disulfane, and an alkylsilane.

*SUB A7*  
9. Process for the preparation of rubber mixtures according to Claim 1, comprising at least one other filler in addition to the rubber, wherein said process comprises adding an organosilanopolysulfane according to Claim 1 in said rubber mixtures.

10. Process for the preparation of rubber mixtures which contain at least one filler in addition to the rubber, comprising adding an organosilane-polysulfane and an organoalkylsilane according to Claim 1.

*E*  
11. A molding obtained from a rubber mixture according to Claim 1.

20 12. The molding according to Claim 11, comprising a pneumatic tire.

*SUB A8*  
13. The molding according to Claim 11, comprising a tire tread.

14. A method for using rubber mixtures according to Claim 1 for the production of moldings, comprising adding the rubber mixture of Claim 1 to a molding composition, and molding the molding composition in a mold for tires or tire treads.

*Add A7*

*Add C3*